WATER CHALLENGES IN THE MAGHREB AND OPPORTUNITIES FOR EUROPEAN INNOVATIVE SOLUTIONS

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President of the Portuguese Water Partnership (PWP)

Barcelona, 6 November 2014

EIP Water Conference 2014

Connecting Innovation Demand and Supply

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Portuguese Water Partnership
a solid and mature cluster of private and public institutions
dedicated to water at the global scale

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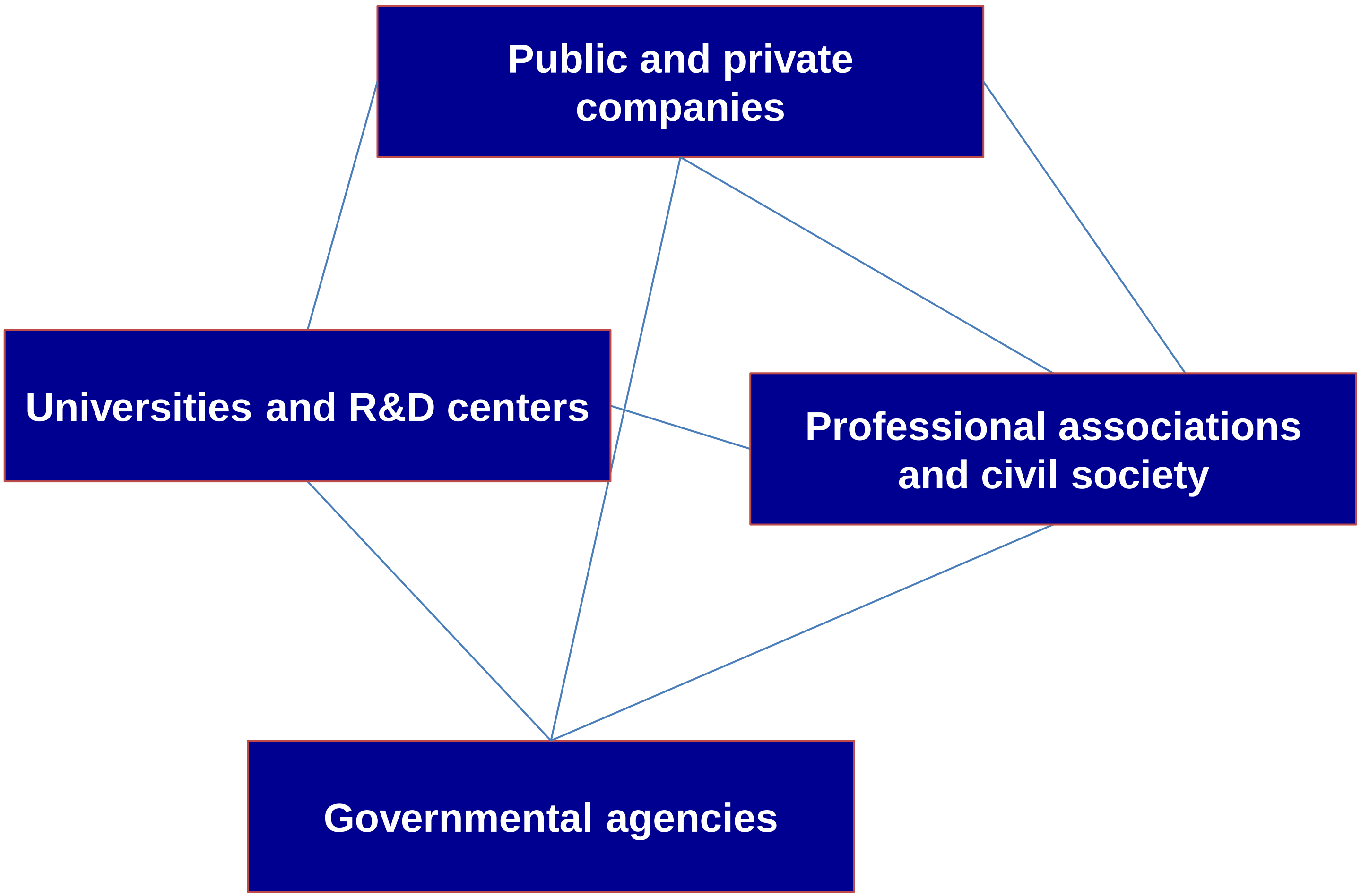
Why is it a "partnership" ?



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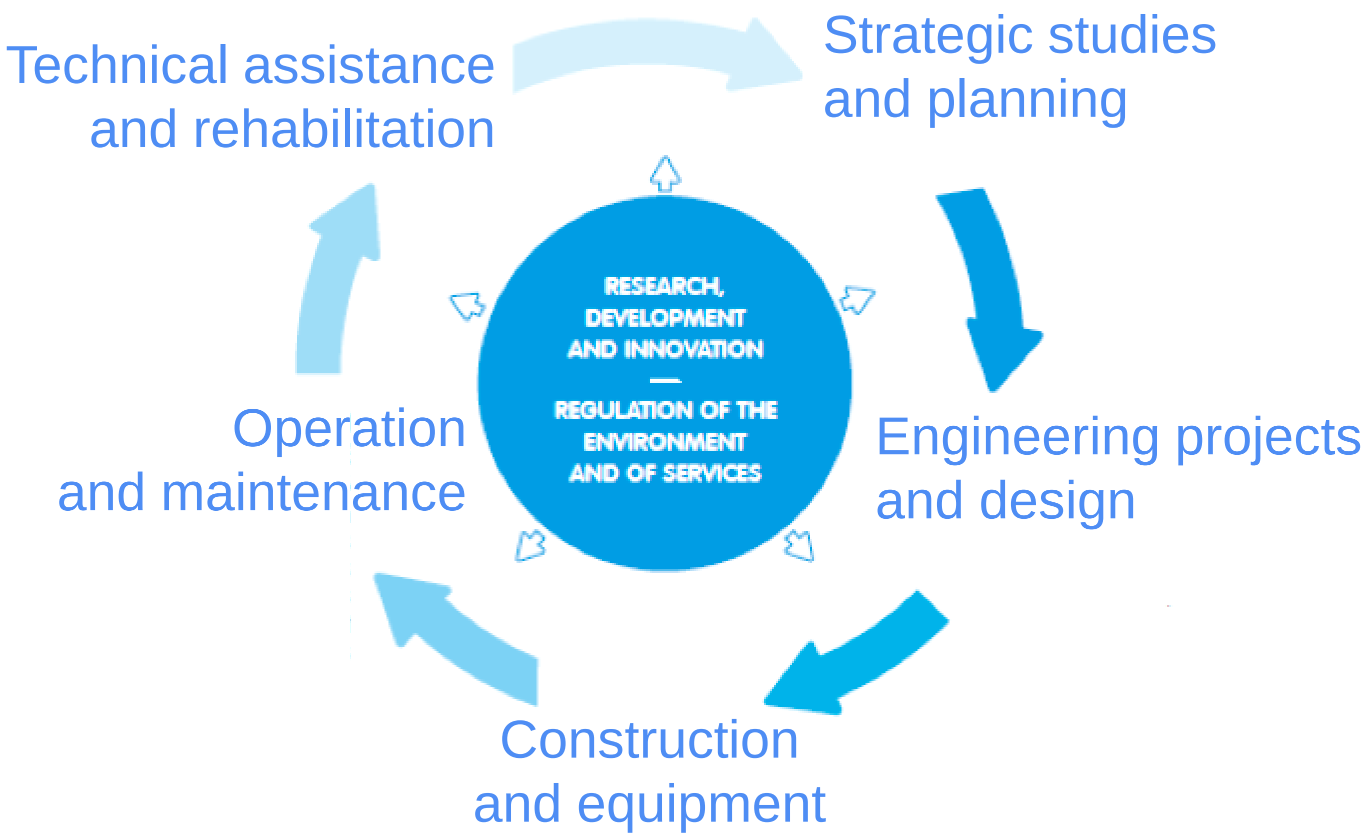
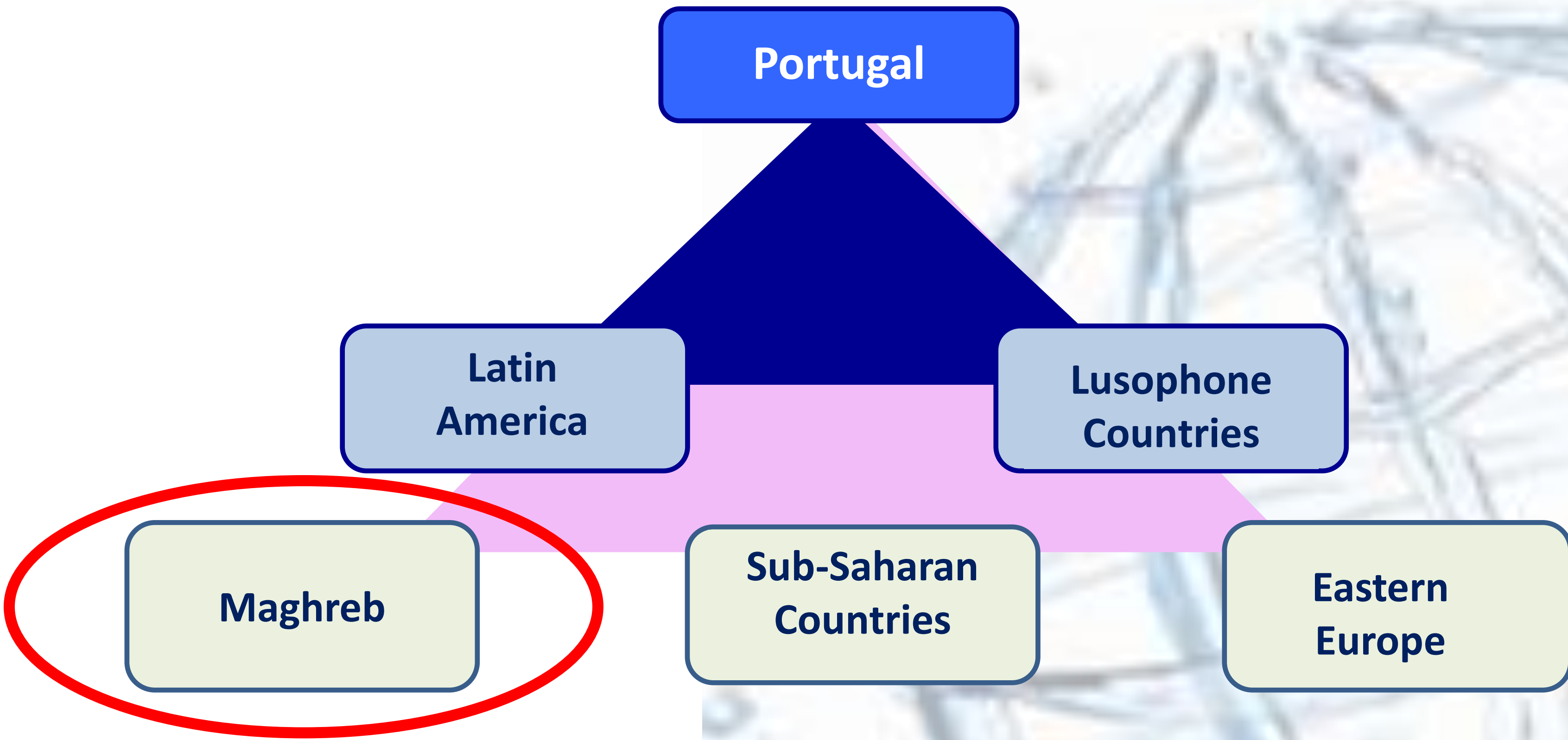
What does “water” mean ?

PWP covers the entire cycle and the entire value chain

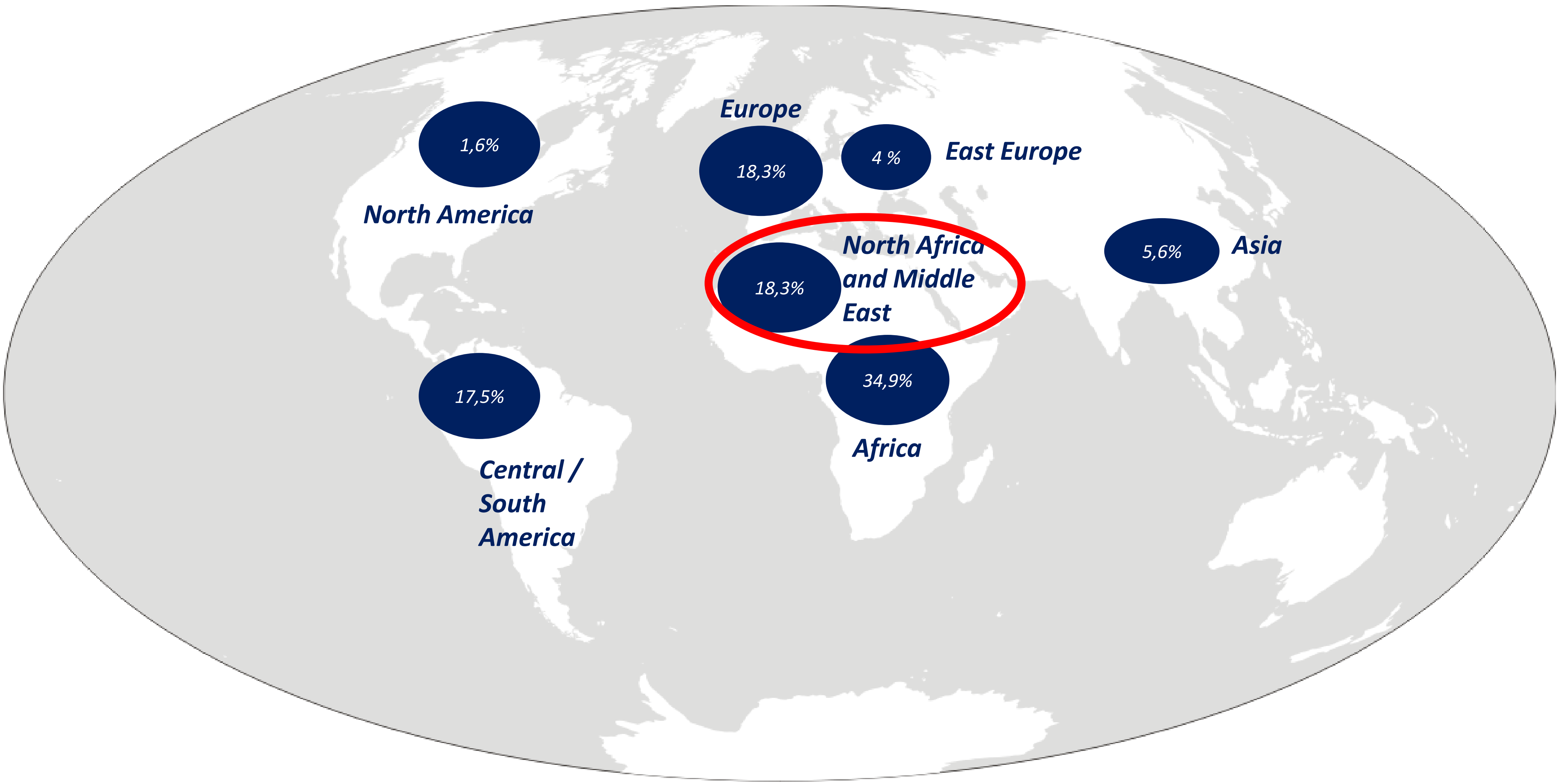
PLANNING AND MANAGEMENT OF WATER RESOURCES	WATER SERVICES	HYDRAULIC DEVELOPMENTS	COASTAL MANAGEMENT	GOVERNANCE



PWP geographical priorities



A presence in the global markets



The Maghreb


FRANCE
ITALY
TURKEY
SPAIN
Mediterranean Sea
Tunis
Algiers
TUNISIA
Rabat
Casablanca
Oran
Tripoli
Benghazi
Madeira (Portugal)
Marrakesh
MOROCCO
EGYPT
Nile
LIBYA
ALGERIA
Canary Is. (Spain)
Ghat
Lake Nasser
Tamanrasset
Sahara Desert
MALI
NIGER
MAURITANIA
Niger
CHAD
Nouakchott
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Lake Chad
SUDAN

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Average rainfall distribution in the Mediterranean basin

Very large variation in space and time

from more than 2 000 mm to less than 100 mm

(Source: 5th World Water Forum – Regional Document MEDITERRANEAN)

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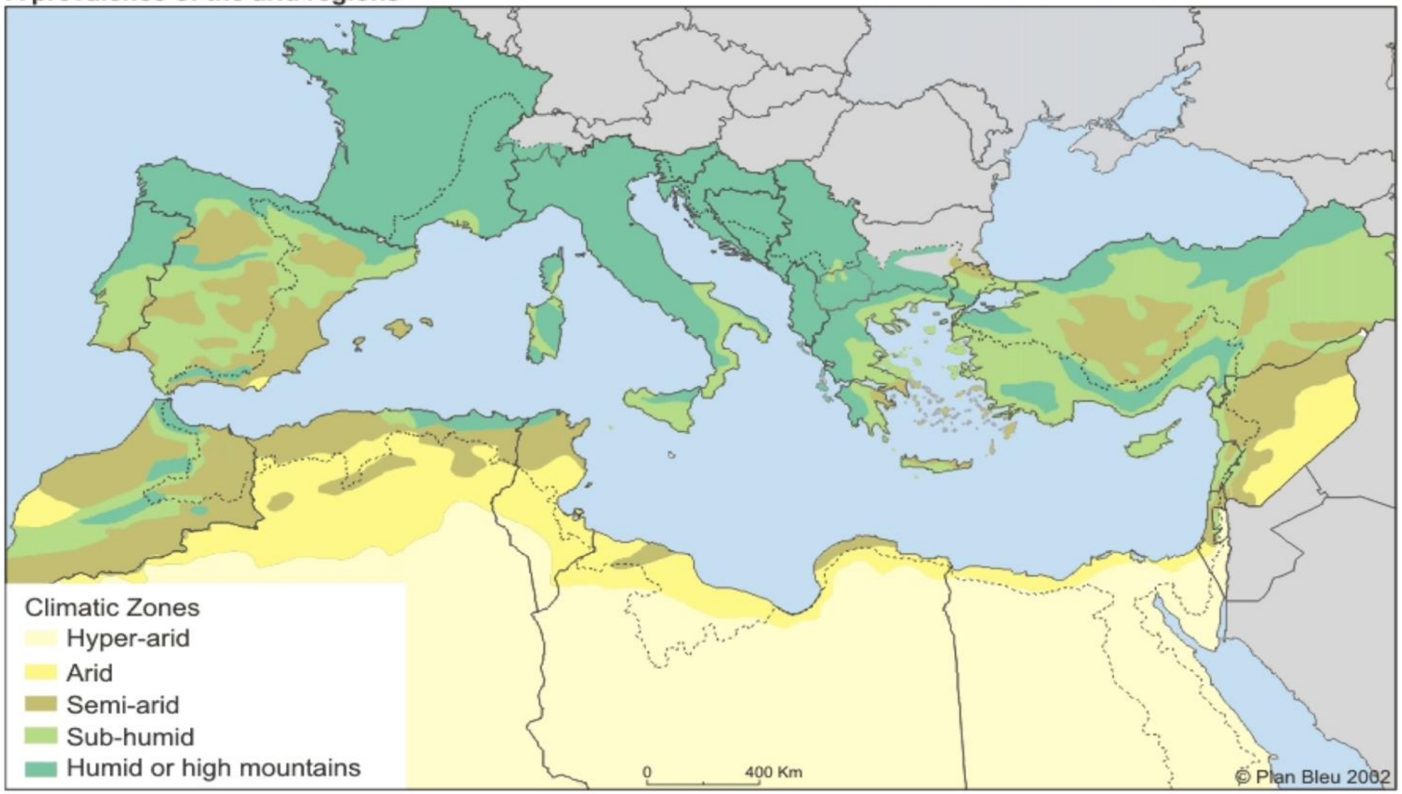
A prevalence of the arid regions



Source : UNESCO MAB 1979

Large prevalence of arid regions

especially in southern and eastern countries

(Source: www.planbleu.org)

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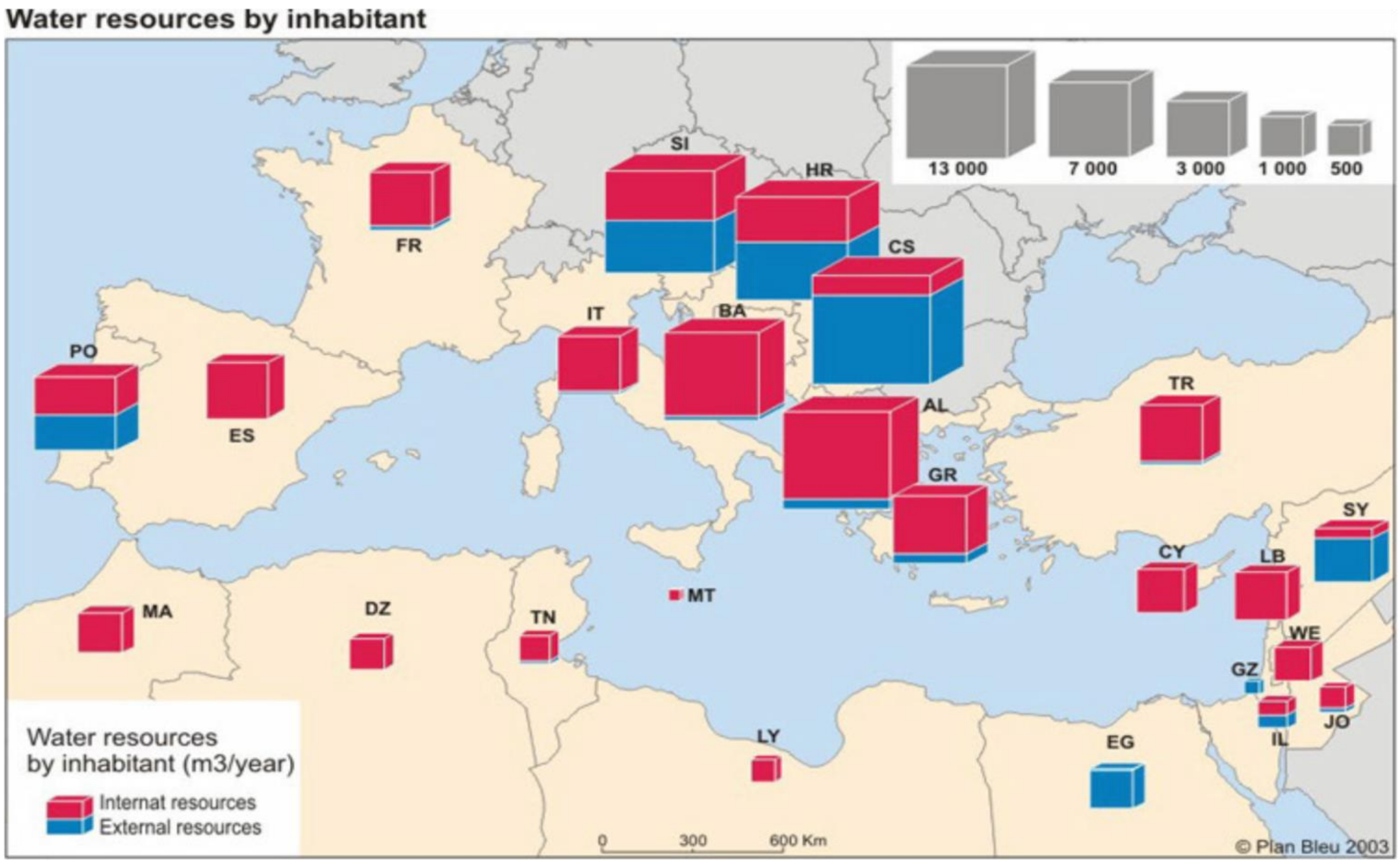

Limited availability of water per capita

significantly less than in the northern Mediterranean

(Source: www.planbleu.org)

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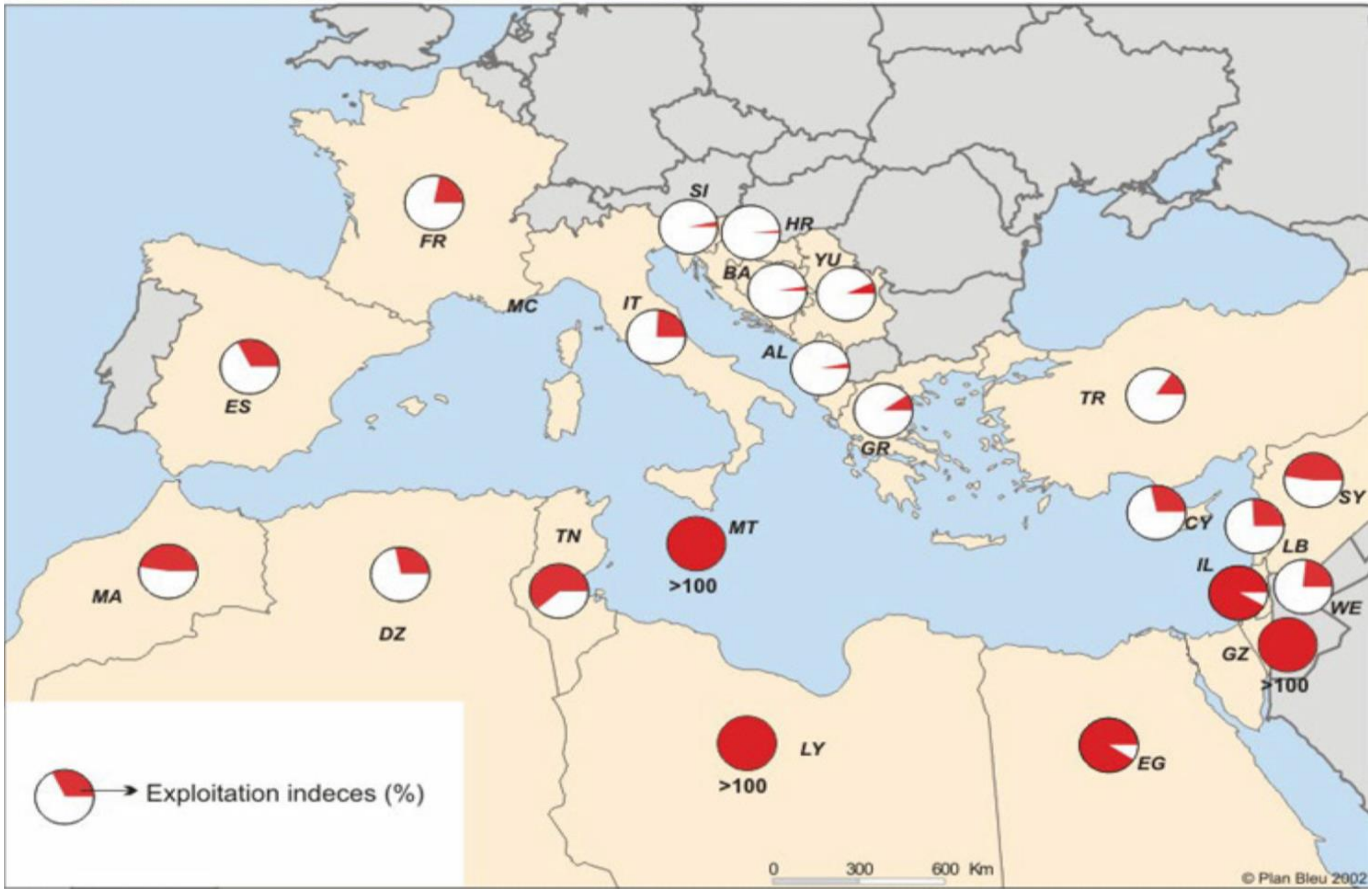
Exploitation indeces of internal and external renewable natural water resources in the Mediterranean countries and territories (actual situation in %)



WEI less than 10 %
— non-stressed

WEI between 10 and 20 %
— low stress

WEI greater than 20 %
— stressed

Water Exploitation Index (WEI)

average value for all the region is 26%, clearly a stressed region

(Source: www.planbleu.org)

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Water in the Mediterranean is an irregular, rare and fragile resource:

Average available ground and surface water: 1085 km3/year

2/3 in Northern, 1/4 in Eastern, 1/10 in Southern countries

7 least provided countries account only for 1% of the total

Cyprus, Israel, Jordan, **Libya**, Malta, Palestinian Territories, **Tunisia**

(Source: 5th World Water Forum – Regional Document MEDITERRANEAN)

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Total consumption of water including desalinization and reuse:

280 km3/year, 26% of total availability

from which 180 km3/year (64%) in irrigation

45% in Northern countries, 82% in Eastern and Southern countries

Total consumption is expected to increase 18% by 2025

28% in Southern countries, 33% in Eastern countries

(Source: 5th World Water Forum – Regional Document MEDITERRANEAN)

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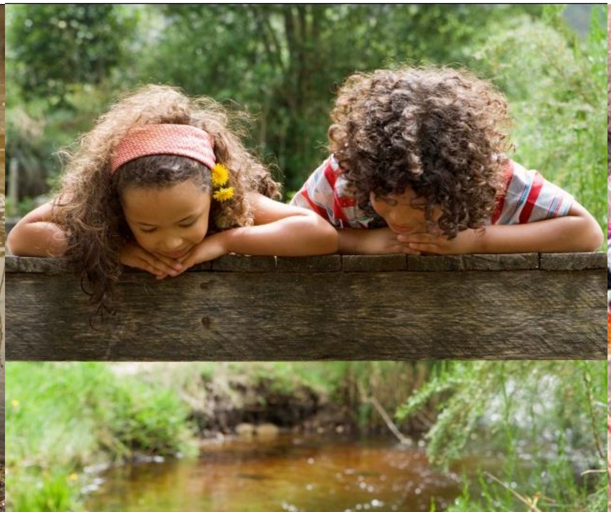
Maghreb market for water innovation:

A different reality?!

Innovation in Africa



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A triple challenge:

What are the local/regional needs ?

Which technology can we provide?

Is it feasible in economic and financial terms?

Is governance appropriate to sustain change?

Project AguaGlobal

A join venture of PWP and AEP

The largest Portuguese business association

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ÁGUAGLOBAL

Key themes of the study:

- Institutional organization
- Government strategy
- Legal and regulatory framework
- Main contracting authorities
- Potential for private sector
- Potential local partners
- International Financial Institutions
- Bilateral and multilateral agencies
- Projects in the pipeline
- Alternative approaches to markets

African target markets selected

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Key features

	Algeria	Morocco
Population 2014 [1] (million people)	39,9	33,5
% urban population	66%	58%
GDP *per capita* (PPP) 2013 [2] (Int. $)	$13,304 (#80)	$7,200 (#114)
Water stress level [3] (0 to 1)	0.79	0.844
% access to improved water supply [4] (% piped on premises)	83% (60%)	83% (72%)
% access to improved sanitation [4]	95%	70%
Water Investment (million USD)	29.000 (2010-2014)	2.500 (2013-2016)
Water Investment (USD/pc/year)	$145	$19

(1) United Nations ; (2) World Bank; (3) Pfister- Growing Blue Toolbox; (4) UNICEF, 2012

Organization of the water clusters

	Governance	Main Contracting Entities	Largest operators of water services	
			Public	Private
Algeria	• *MRE – Ministère des Ressources en Eau* • *MADR – Ministère de l'Agriculture et du Développement Rural* • *ABH - Agences des Bassins Hydrographiques (19)* • National Agencies (ADE, ONA, ANRH, ANBT, ONID, OPI, INPE)	• *ADE - Algériennes des Eaux* • *ONAS – Office National de l'Assainissement* • *ANBT –Agence Nationale des Barrages et Transferts* • *ONID – Office National de l'Irrigation et du Drainage* • *OPI – Office de Périmètres d'Irrigation* • *DREW - Directions des Ressources en Eau des wilayas*	• ADE • ONAS • SEAAL • SEOR • SEACO • SEATA 4 regional operators in Algeria (Alger, Oran, Constantine, Tarf e Annaba)	• Incipient; • Turnkey contracts arising from public procurement; • Investment in water desalination.
Morocco	• *Ministère de l'Energie, des Mines, de l'Eau et de l'Environnement* • *Ministère de l'Agriculture et de la Pêche Maritime* • *Ministère de Intérieur* • *Agences des Bassins Hydrographiques* • *Offices Régionaux de Mise en Valeur Agricole, ORMVA (9)*	• *ONEE - L'Office National de l'Electricité et de l'Eau Potable* • Regional Directorates of ONEE - Municipal or intermunicipal entities distribution of water and electricity	• *ONEE* • *Régies Autonomes intercommunales de distribution d'eau et d'électricité (12)*	• *Lyonnaise des Eaux de Casablanca* • *Societé des Eaux et d´Electricité du Nord-AMENDIS* • *Societé REDAL*

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	Investment plans		Opportunities
Algeria	**Investment in the Water Sector 2010-2014:** • **Over US$ 23 billion (app. 5.8 billion per year)** • Water distribution systems • Sewage treatment • Water pollution control • 32 new dams • 25 new systems of water transfer • Desalination plants • Irrigation and drainage water	Algeria	• **4th largest Arab economy** • Strong financial resource availability resulting in revenues from oil • Investment plan (2030) in major modernization projects and infrastructure construction • Openness to entry of foreign companies • Incentives to create partnerships in the private sector • Information on public procurement is available • **Strong possibility of funding from the Algerian banks** • Association agreement with the EU, with total customs dismantling until 2017.
Morocco	**Estimated Investment in Water Sector 2013- 2016:** • Over € 1.9 billion • Water supply: US$ 1300 M • Water supply in rural populations 500 M • Wastewater treatment: US$ 530 M • Improved performance: US$ 140 M **US$ 625 M annual investment in the water sector (2013-16)**	Morocco	• **2nd largest economy in the Maghreb and 6th in Africa** • Political and institutional stability • Advanced status agreement with the EU • Extensive programs of public and private works • Extensive modernization programs of infrastructure • Mechanisms of preferential credit • **Greater openness to private sector traditionally public areas (such as the water sector).**

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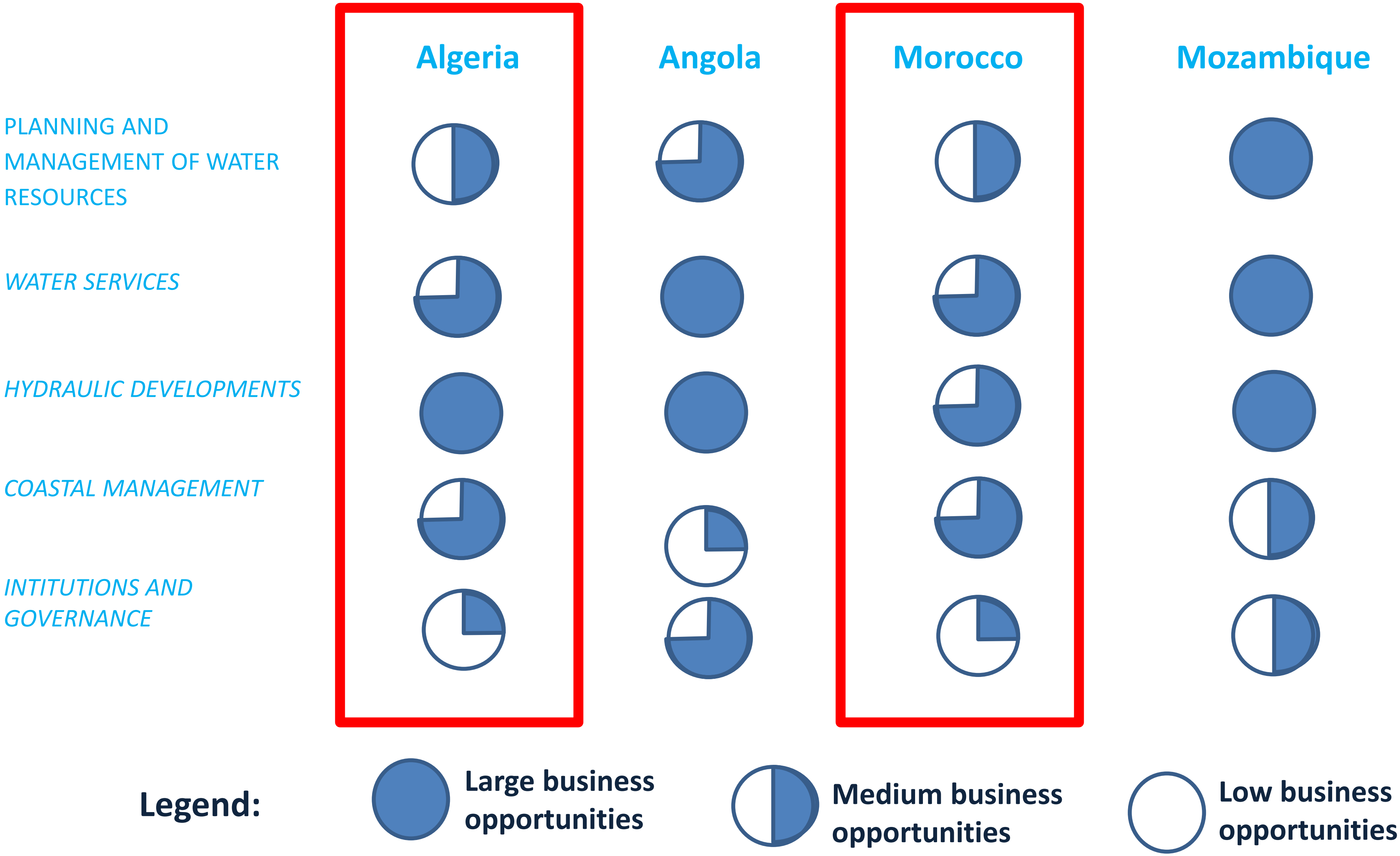
Areas of opportunity



Water challenges in the Maghreb and opportunities for European innovative solutions

- An open back-to-back meeting promoting a broad discussion on water challenges in the Maghreb region and opportunities for greater uptake of European innovative solutions. The session brings together the perspectives from the Union for the Mediterranean, UN-Habitat, the European Investment Bank and the Portuguese Water Partnership.

Programme

- **16:00 - 16:20 Prof. Francisco Nunes Correia, President, PWP – Portuguese Water Partnership**
- *Opening intervention and session moderator*

- **16:20 - 16:40 Dra. Teresa Ribeiro, Deputy Secretary General, UfM - Union for the Mediterranean**
- *How can the UfM and the 5+5 Forum facilitate joint initiatives and innovation uptake across the Mediterranean?*

- **16:40 – 17:00 Dr. Faraj El-Awar, Programme Manager, GWOPA - Global Water Operator Partnership's Alliance/ UN-Habitat**
- *Can Water Operator Partnerships across the Mediterranean provide opportunities for technology transfer?*

- **17:00 – 17:20 EIB representative and/ or EBRD representative**
- *What role can EIB/ EBRD play in facilitating the implementation of European innovative water solutions in the Maghreb region?*

- **17:20 – 18:00 Open discussion and Q&A**

- **17:20 – 17:40 Prof. Rafaela Matos, Director, Head of Hydraulics & Environment Department, LNEC – National Laboratory of Civil Engineering, and PWP Board member**
- *Concluding remarks and next steps*

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Union for the Mediterranean
Union pour la Méditerranée
الإتحاد من أجل المتوسط

5+5

GWOPA
Global Water Operators' Partnerships Alliance

European Investment Bank

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Thank you !

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